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Albin et al.

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(54) **LOWER BODY GARMENT WITH ELASTICITY-REDUCING PANEL**

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A41D 13/00 (2006.01)

(52) **U.S. Cl.**
CPC ***A41D 1/08*** (2013.01); ***A41D 13/0015*** (2013.01)

(58) **Field of Classification Search**
USPC 2/69, 22, 23, 227; 66/177; 482/124; 602/62
See application file for complete search history.

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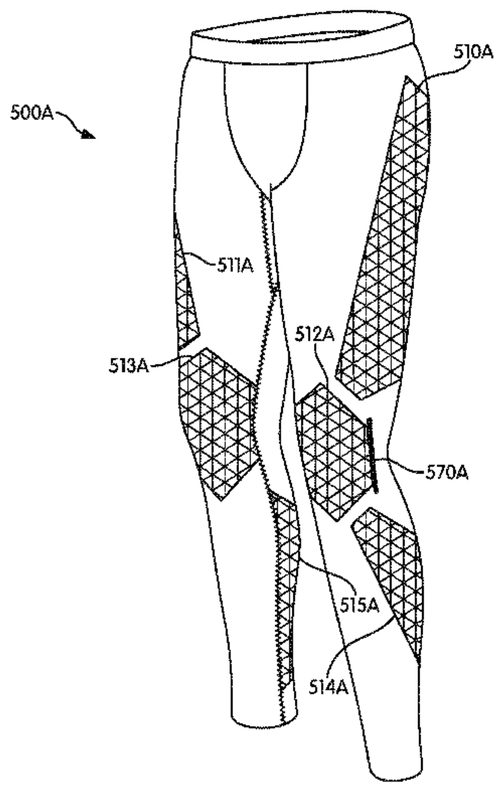
(57) **ABSTRACT**

A garment may be formed from a stretchable material. Various portions of the garment may contain imprinted ink. Elasticity of the garment fabric is reduced in the regions onto which the ink has been printed, thereby providing a support and/or a feeling of support to certain muscles and/or muscle groups.

11 Claims, 16 Drawing Sheets



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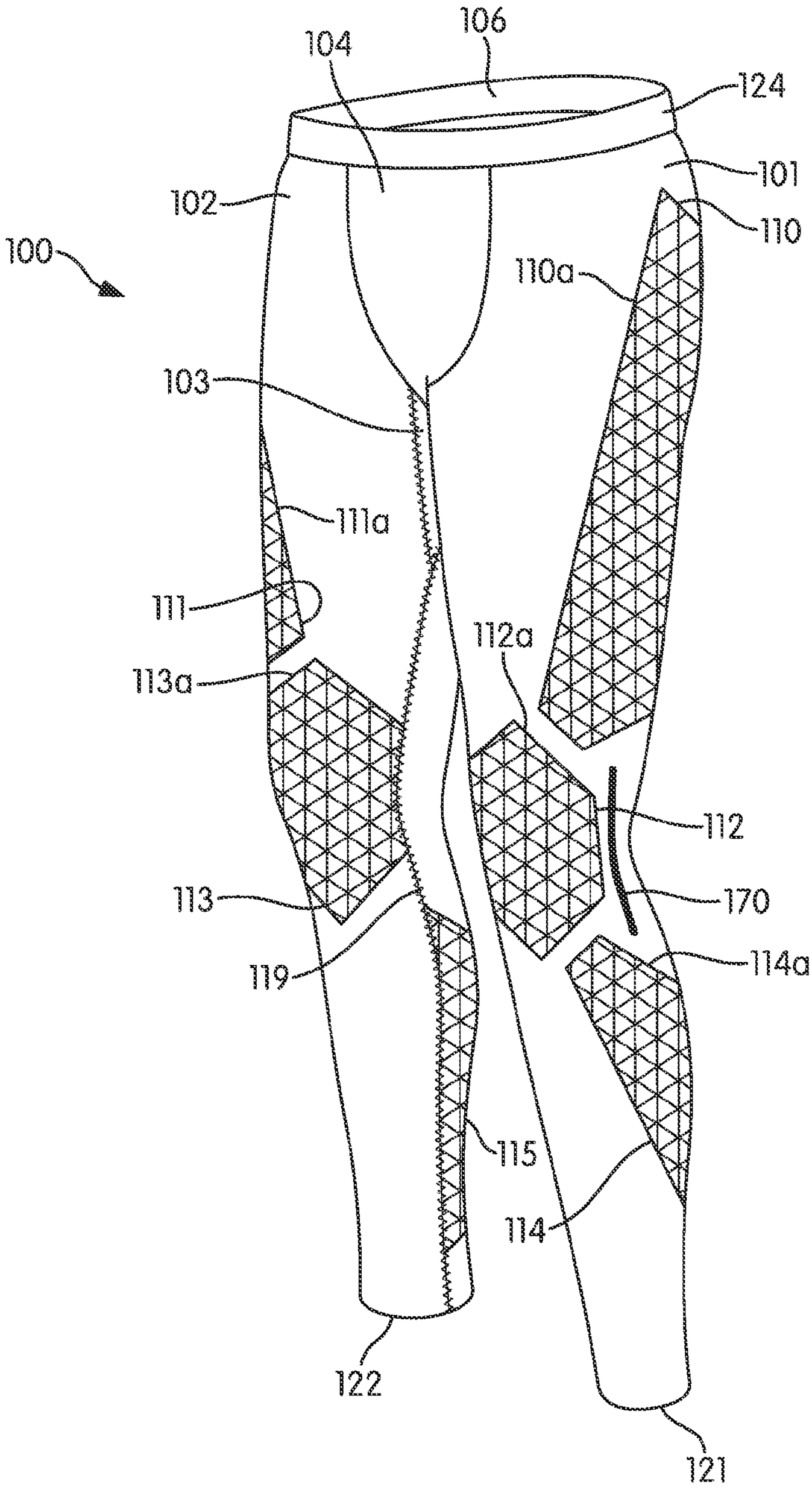
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104
124
101
102
110
100
110a
103
111a
111
112a
113a
112
113
170
119
114a
115
114
122
121

FIG. 1A

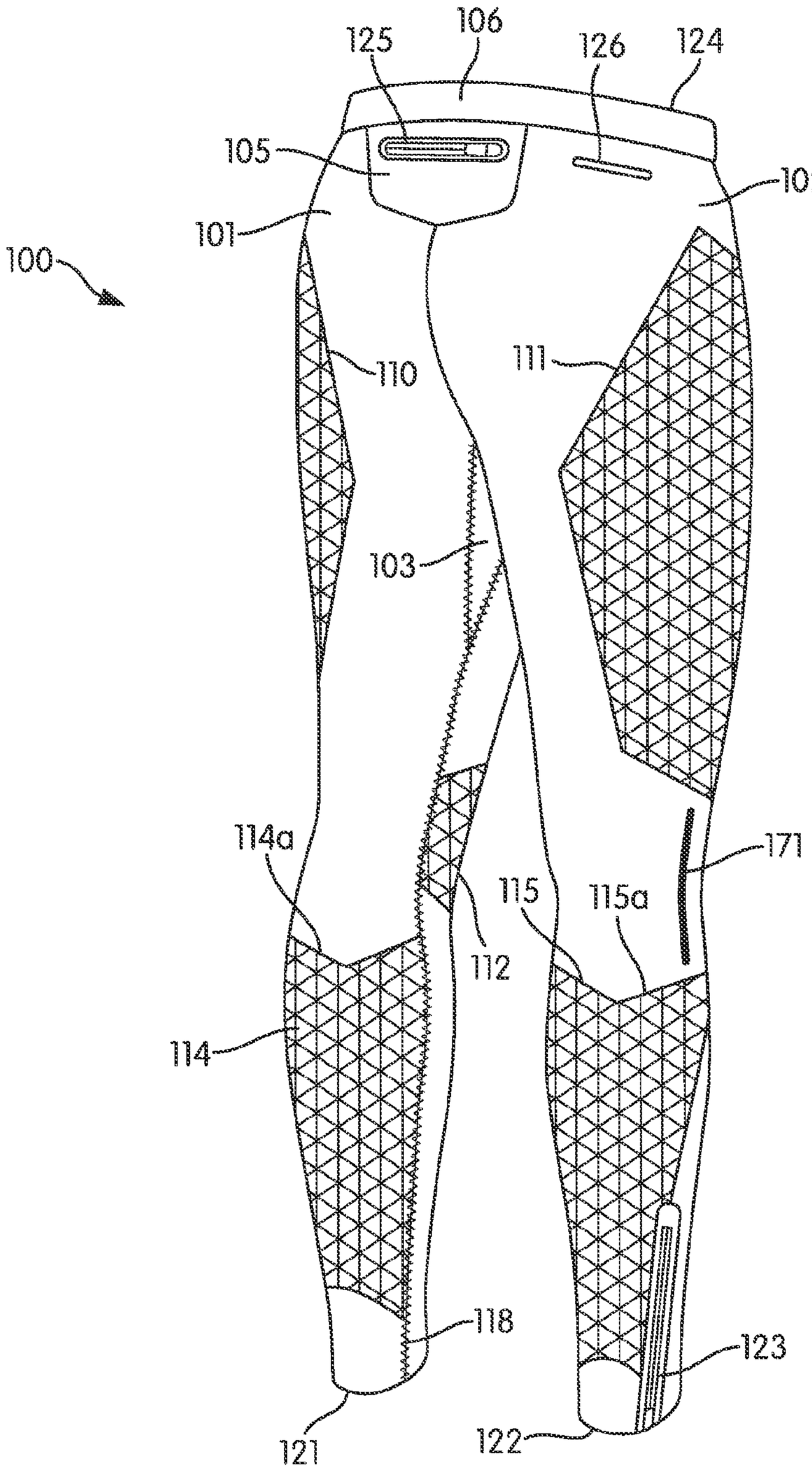

125
106
126
124
105
102
101
100
110
111
103
114a
171
115
115a
112
114
118
123
121
122

FIG. 1B

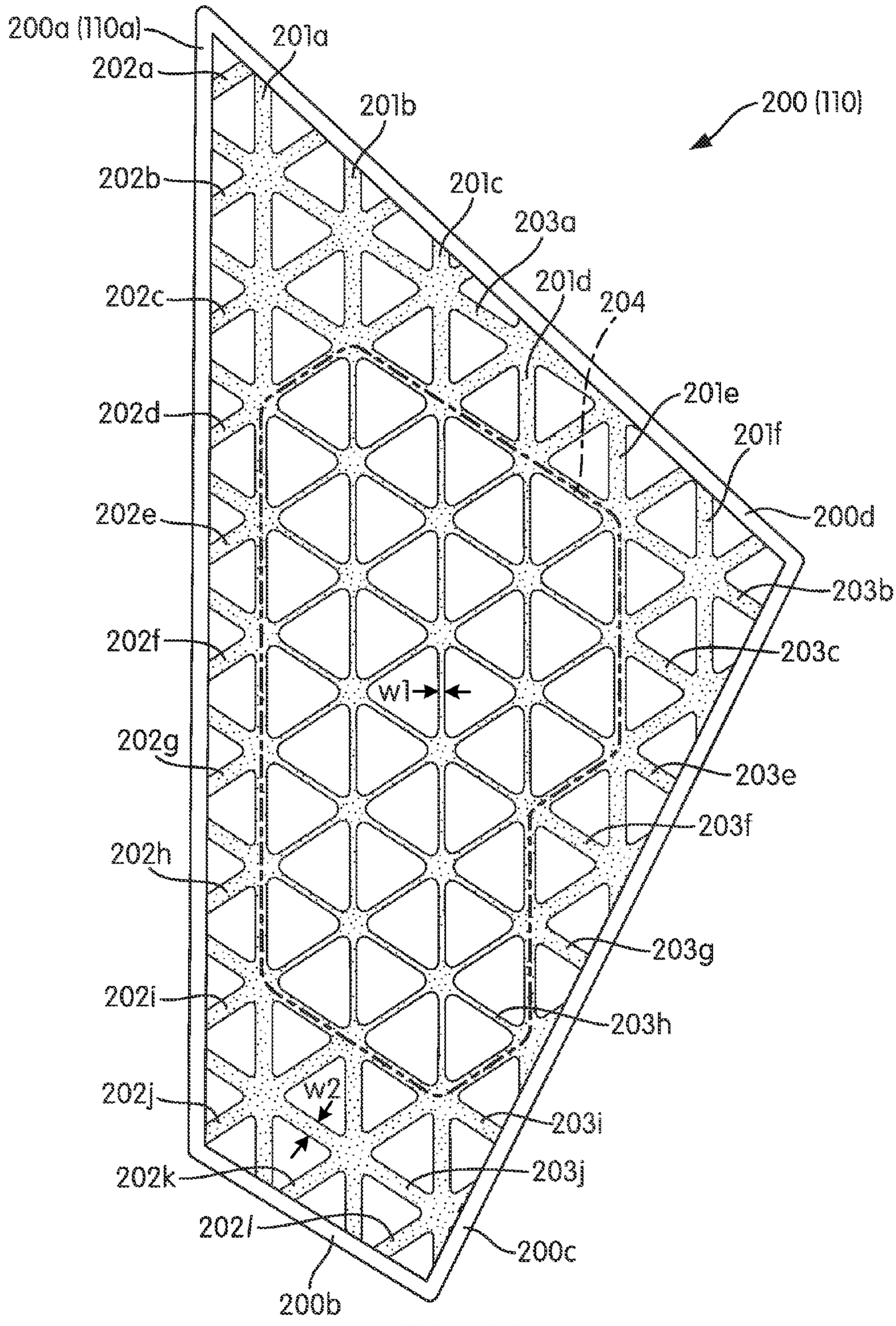
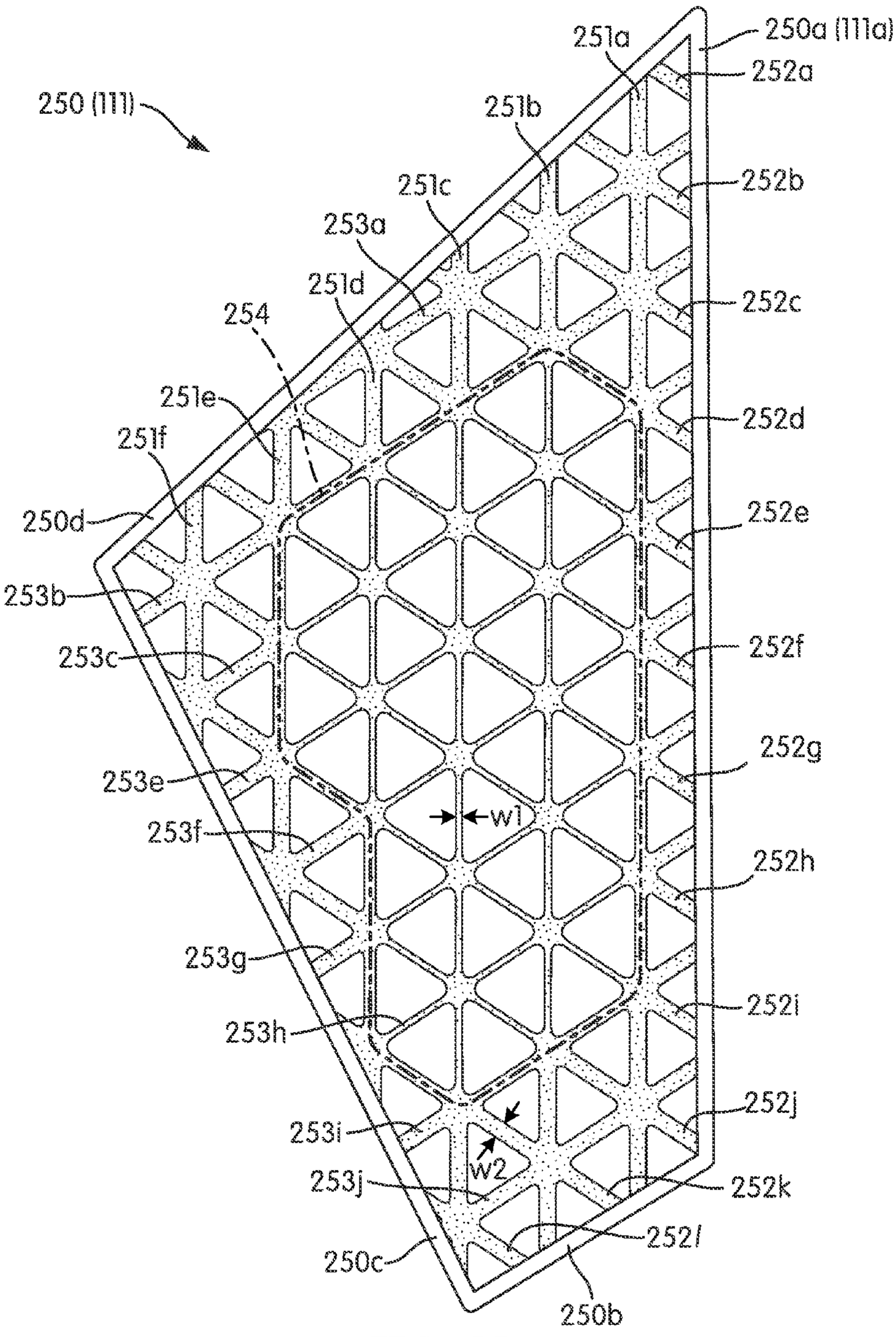

200a (110a)
201a
202a
201b
200 (110)
202b
201c
203a
202c
201d
204
201e
202d
201f
200d
202e
203b
202f
203c
w1
202g
203e
202h
203f
203g
202i
203h
202j
w2
203i
202k
203j
202l
200c
200b

FIG. 2A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251a
250a (111a)
252a
251b
252b
251c
253a
251d
252c
254
251e
252d
251f
250d
252e
253b
253c
252f
252g
253e
w1
253f
252h
253g
252i
253h
252j
253i
w2
253j
252k
252l
250c
250b

FIG. 2B

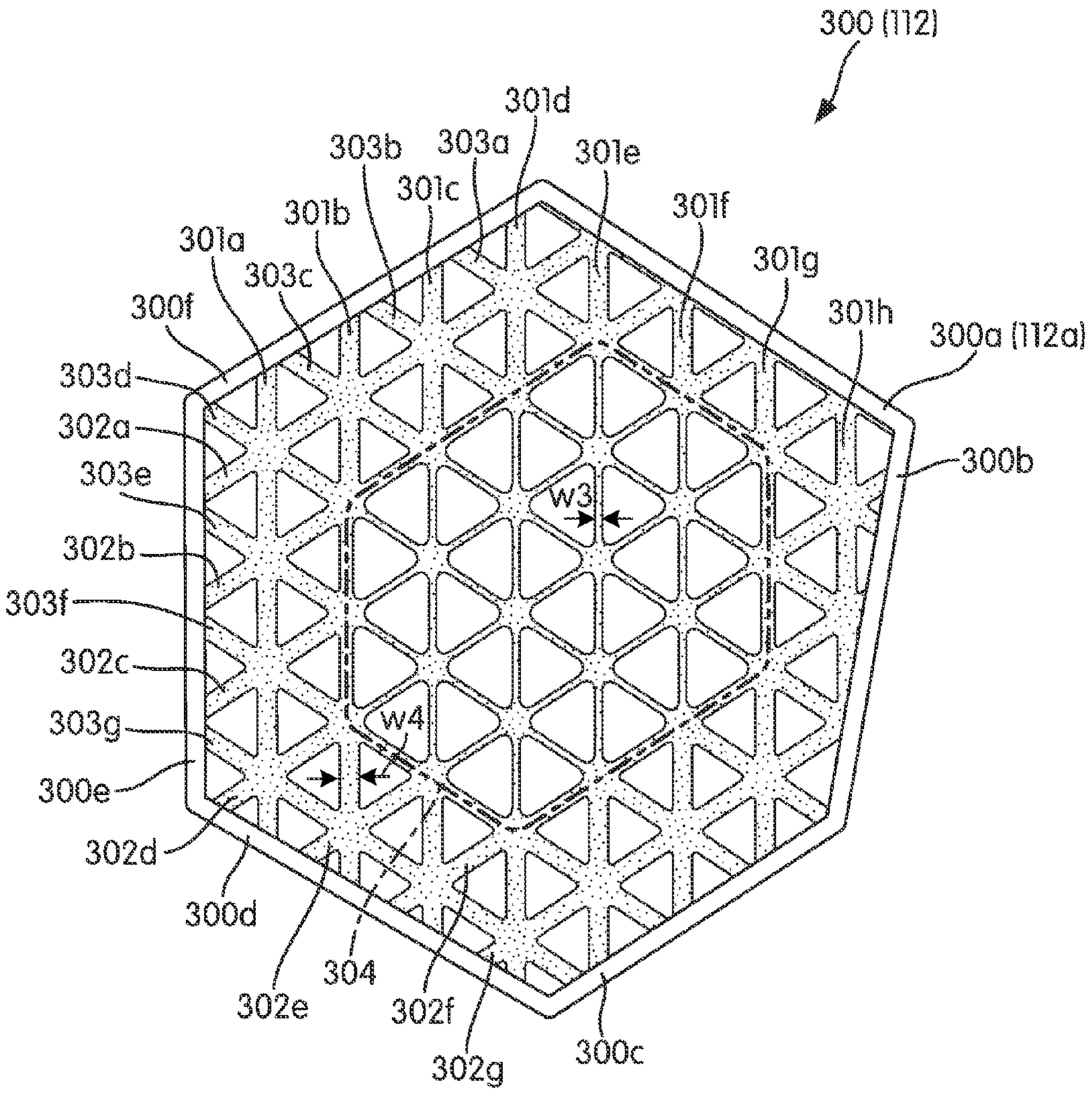

300 (112)
301d
303b
303a
301e
301c
301b
301f
301a
303c
301g
300f
301h
300a (112a)
303d
302a
303e
300b
W3
302b
303f
302c
303g
W4
300e
302d
300d
304
302e
302f
302g
300c

FIG. 3A

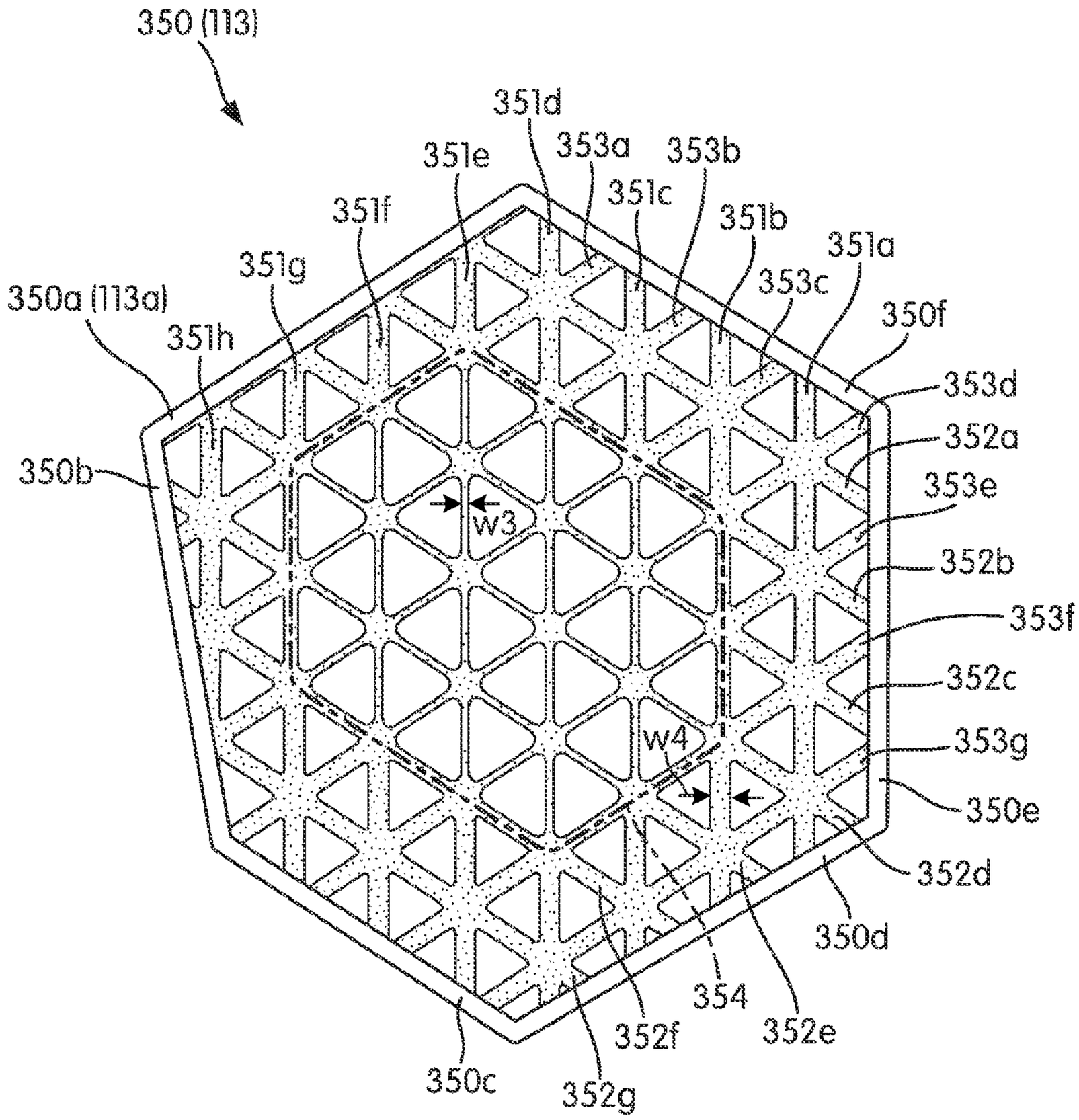
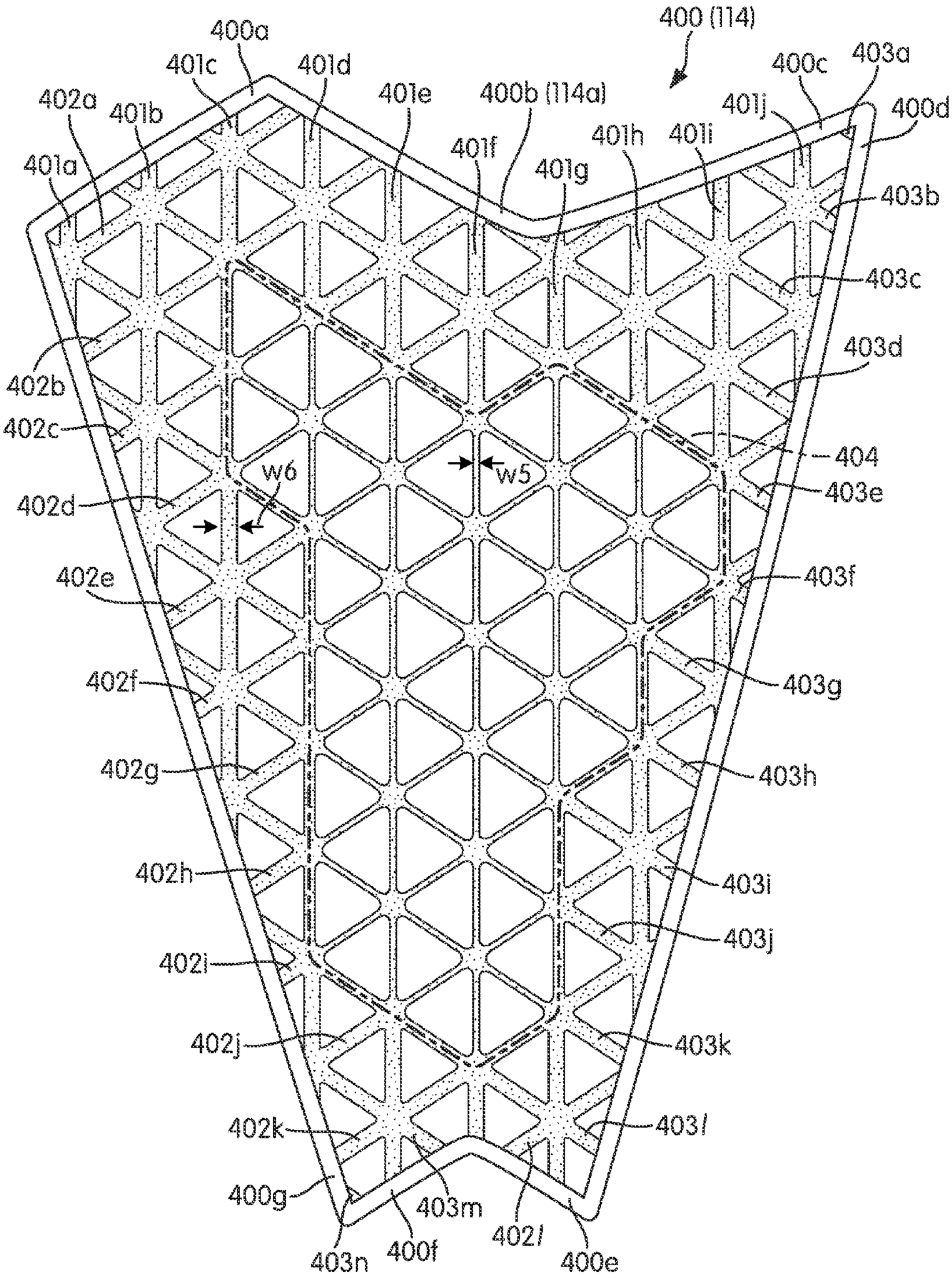

350 (113)
351d
351e
353a
353b
351f
351c
351b
351a
351g
353c
350a (113a)
350f
351h
353d
352a
350b
353e
w3
352b
353f
352c
w4
353g
350e
352d
350d
354
352f
352e
350c
352g

FIG. 3B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400a
401c
401d
401e
400b (114a)
400c
403a
401j
400d
402a
401b
401a
401f
401g
401h
401i
403b
403c
403d
402b
402c
404
w6
w5
403e
402d
403f
402e
403g
402f
403h
402g
403i
402h
403j
402i
403k
402j
403l
402k
400g
403m
402l
403n
400f
400e

FIG. 4A

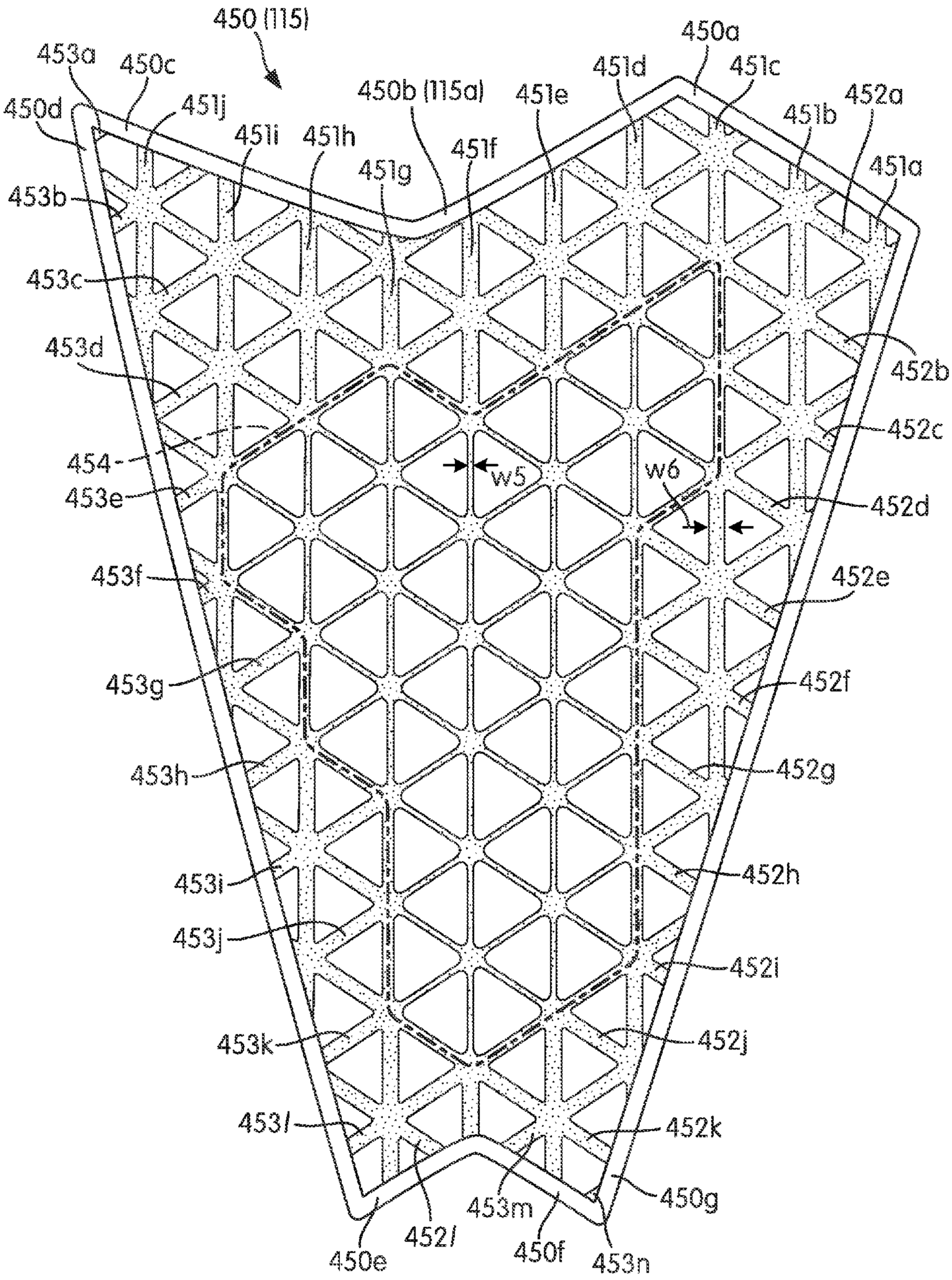
450 (115)
453a
450c
450d
451j
451i
451h
450b (115a)
451e
451d
450a
451c
451b
452a
451a
451g
451f
453b
453c
453d
452b
452c
454
453e
w5
w6
452d
453f
452e
453g
452f
453h
452g
453i
452h
453j
452i
453k
452j
453l
452k
450g
453m
452l
450e
450f
453n

FIG. 4B

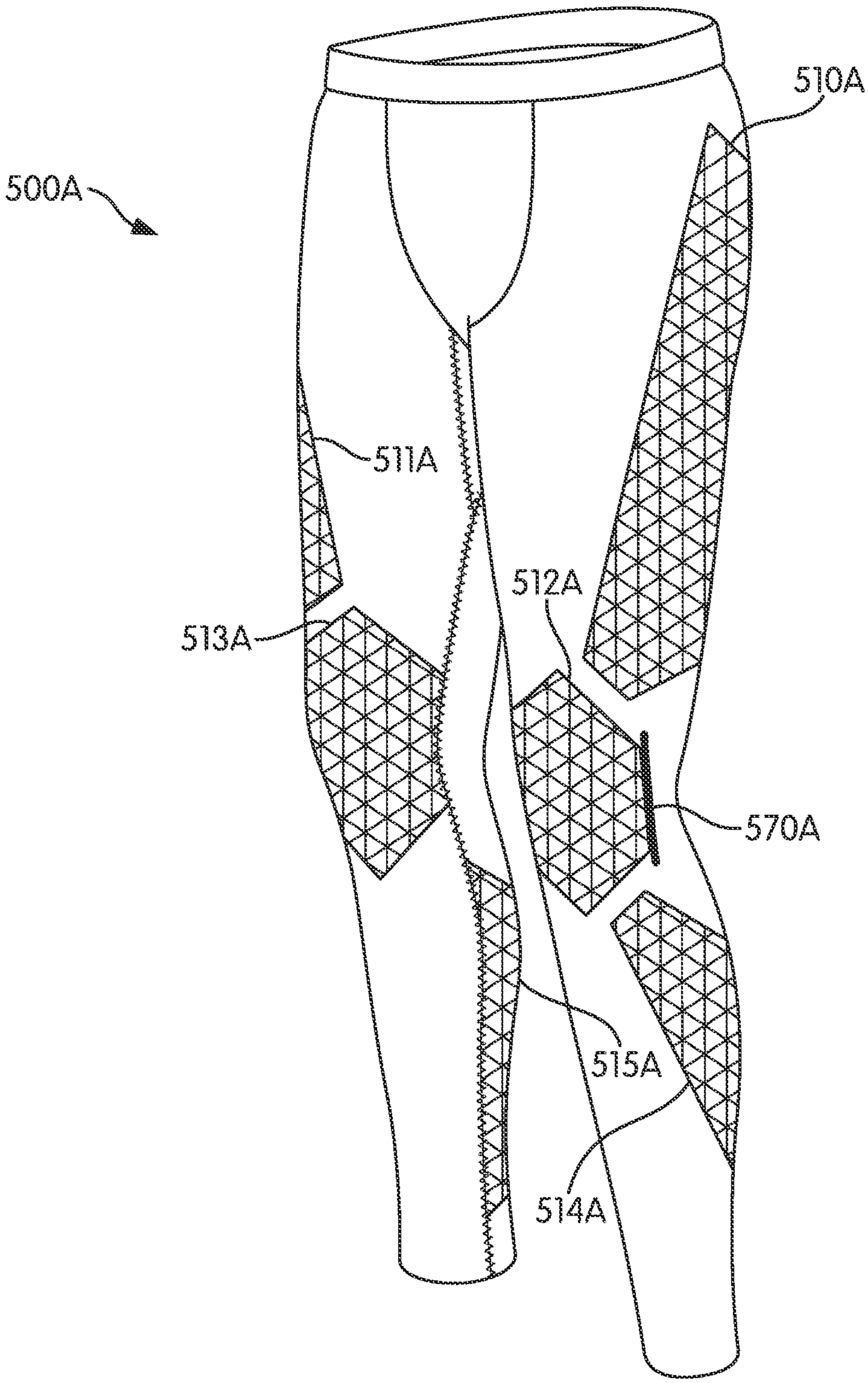

FIG. 5A

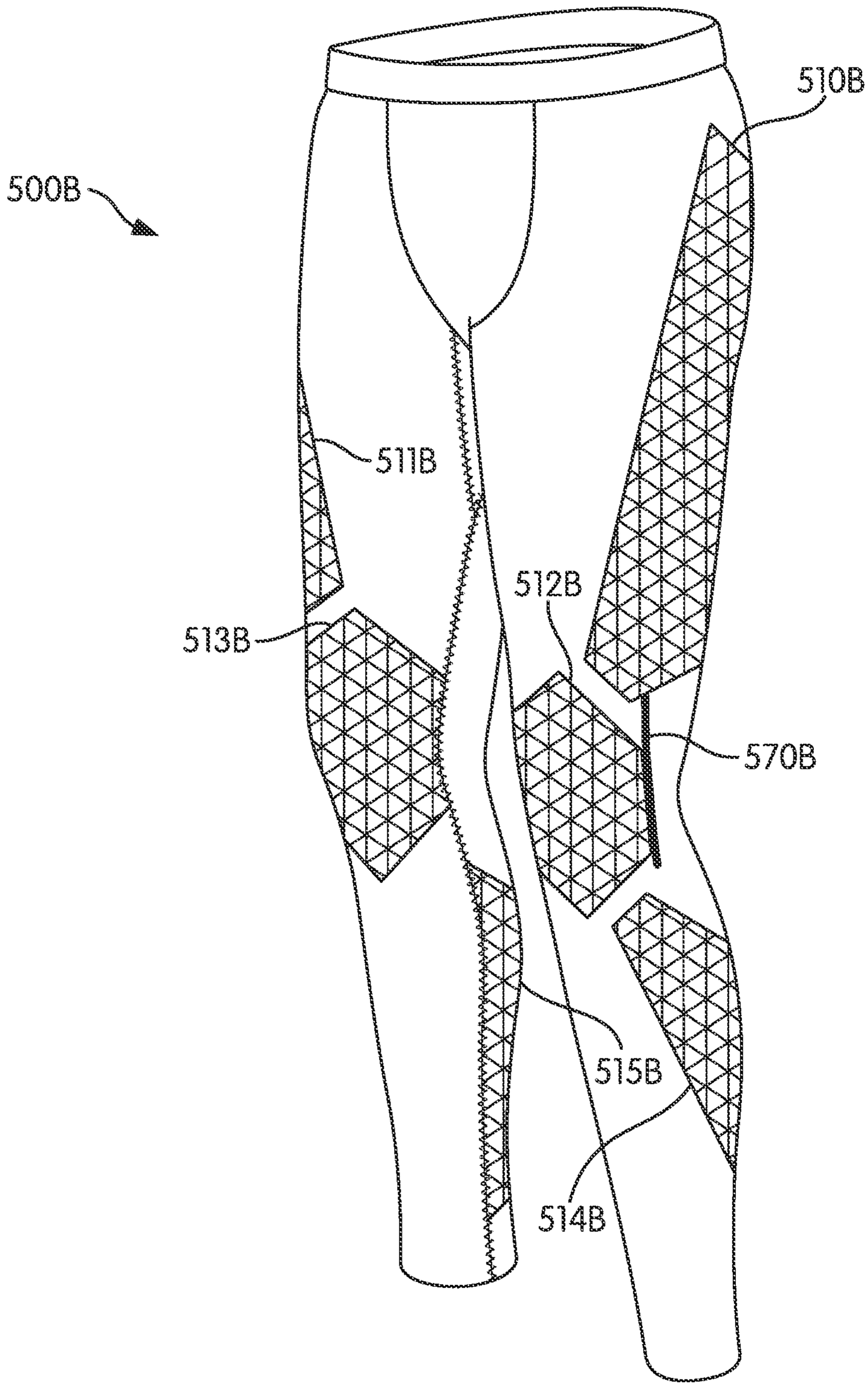

FIG. 5B

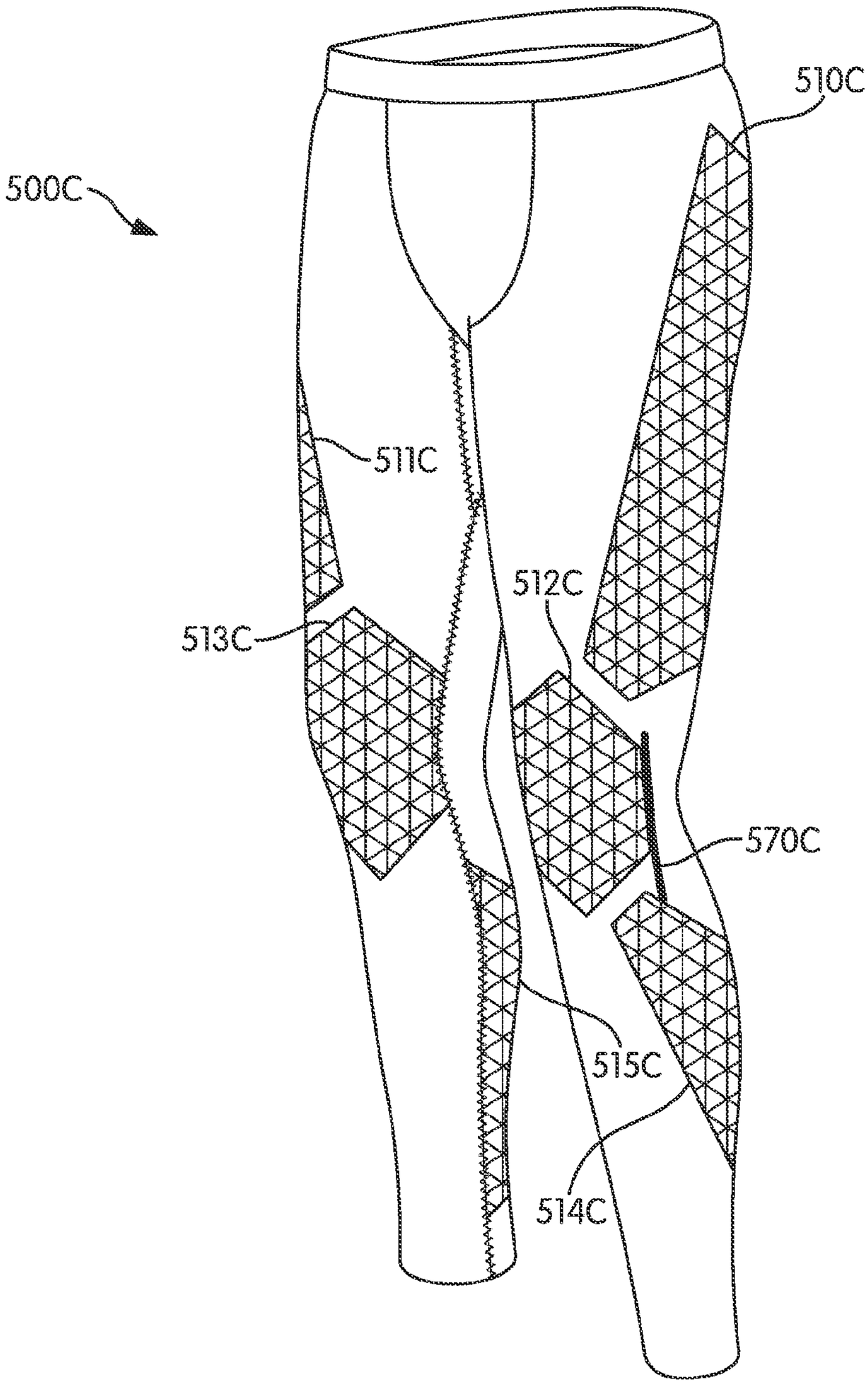

FIG. 5C

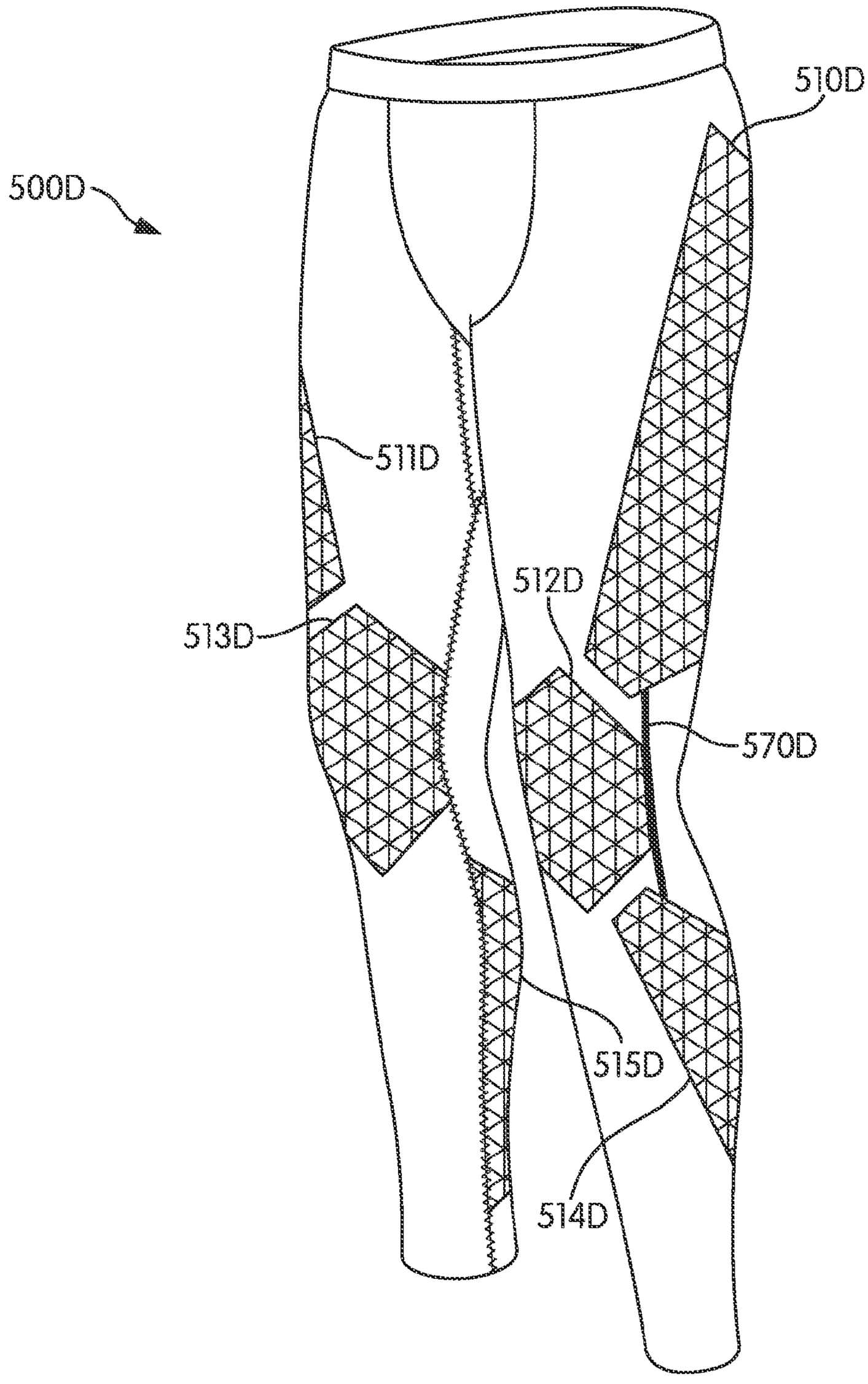

FIG. 5D

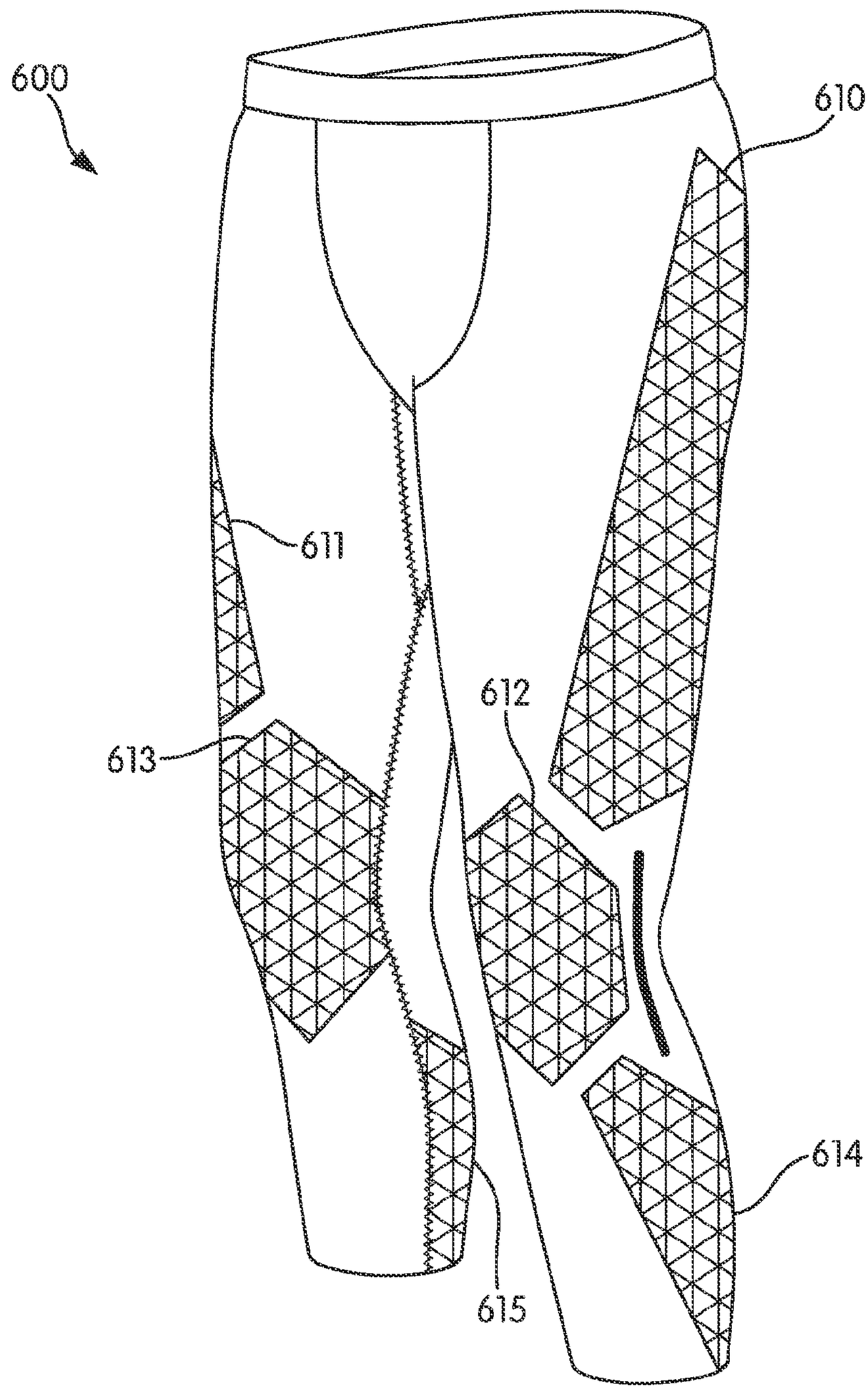

FIG. 6A

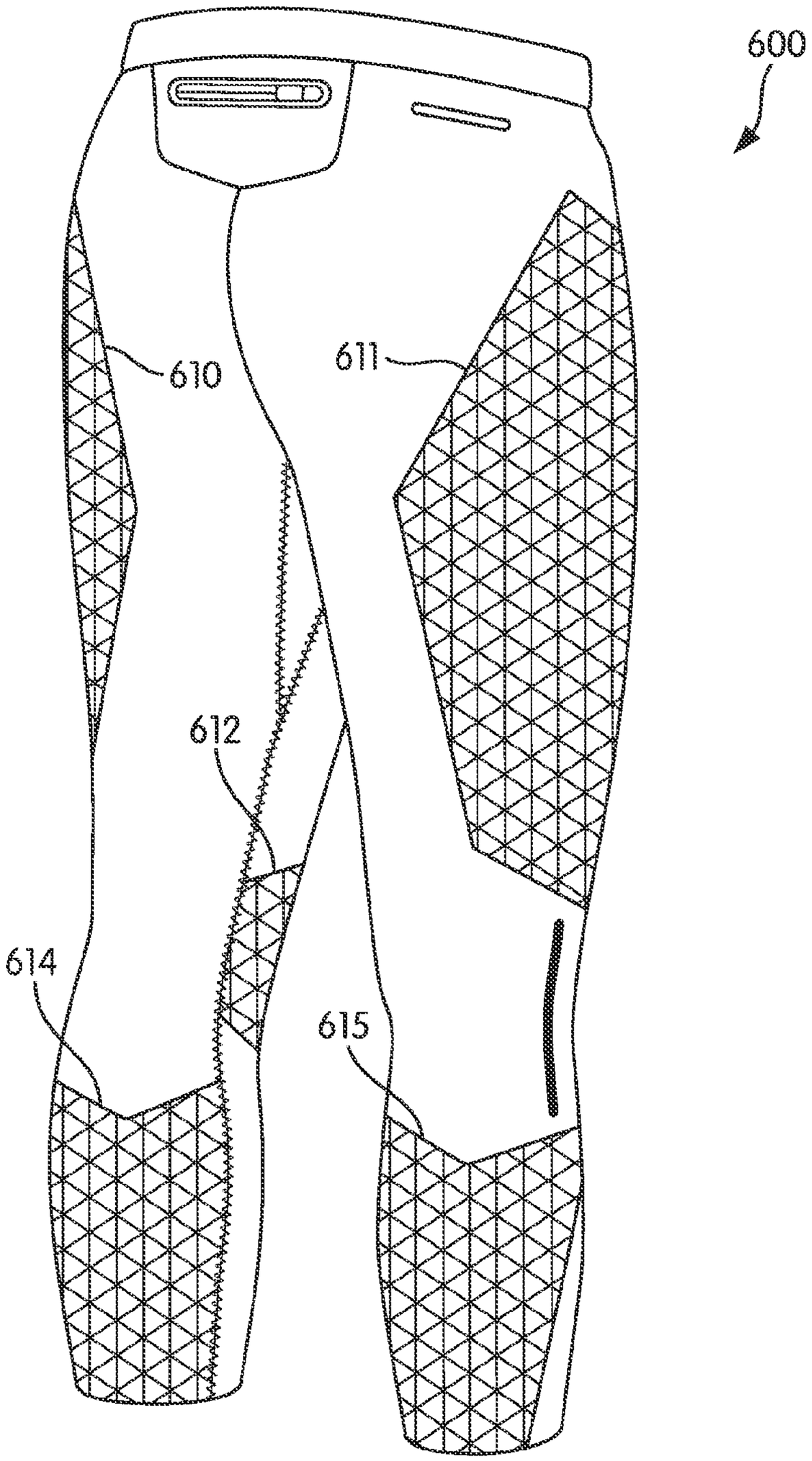

FIG. 6B

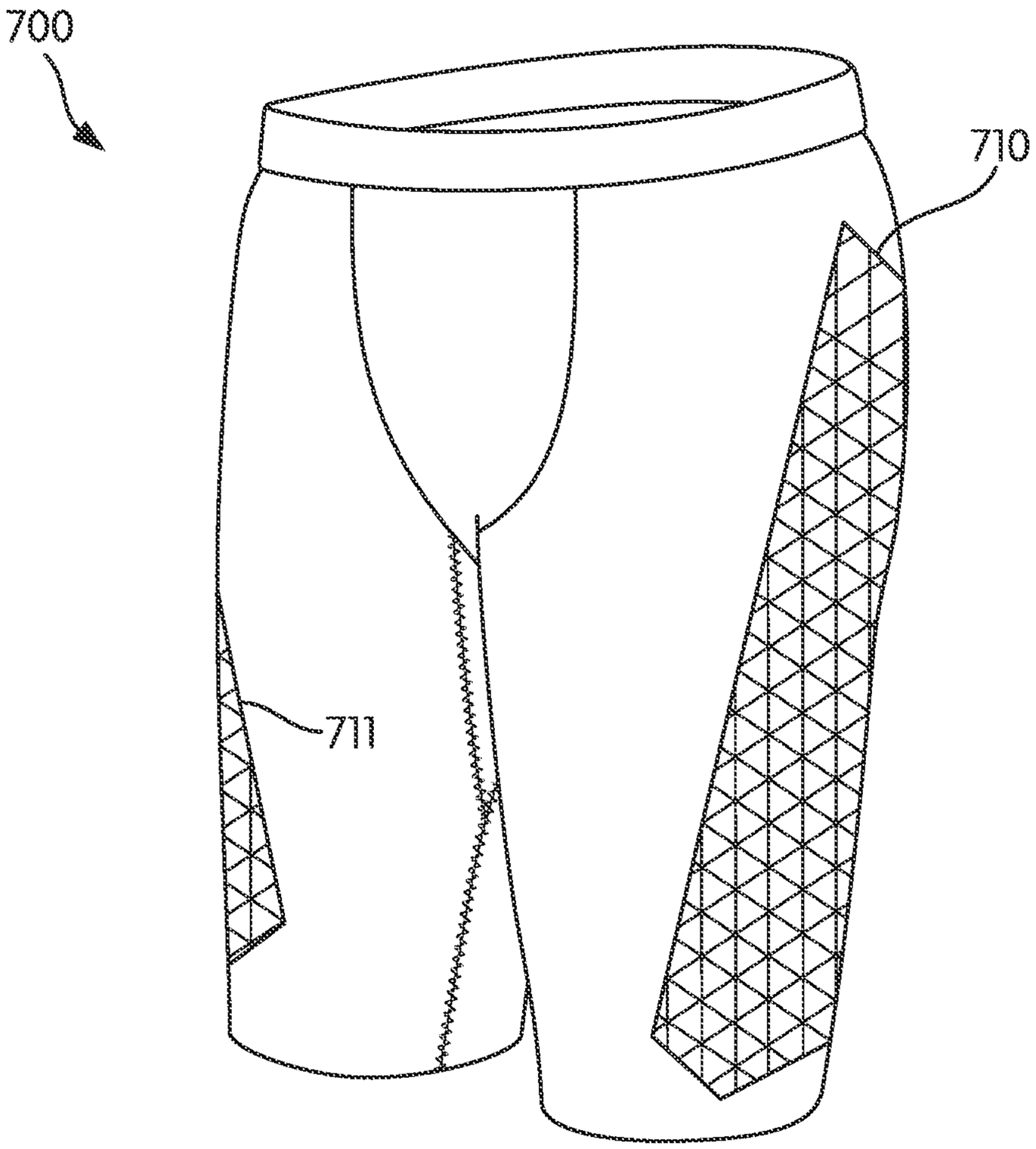

FIG. 7A

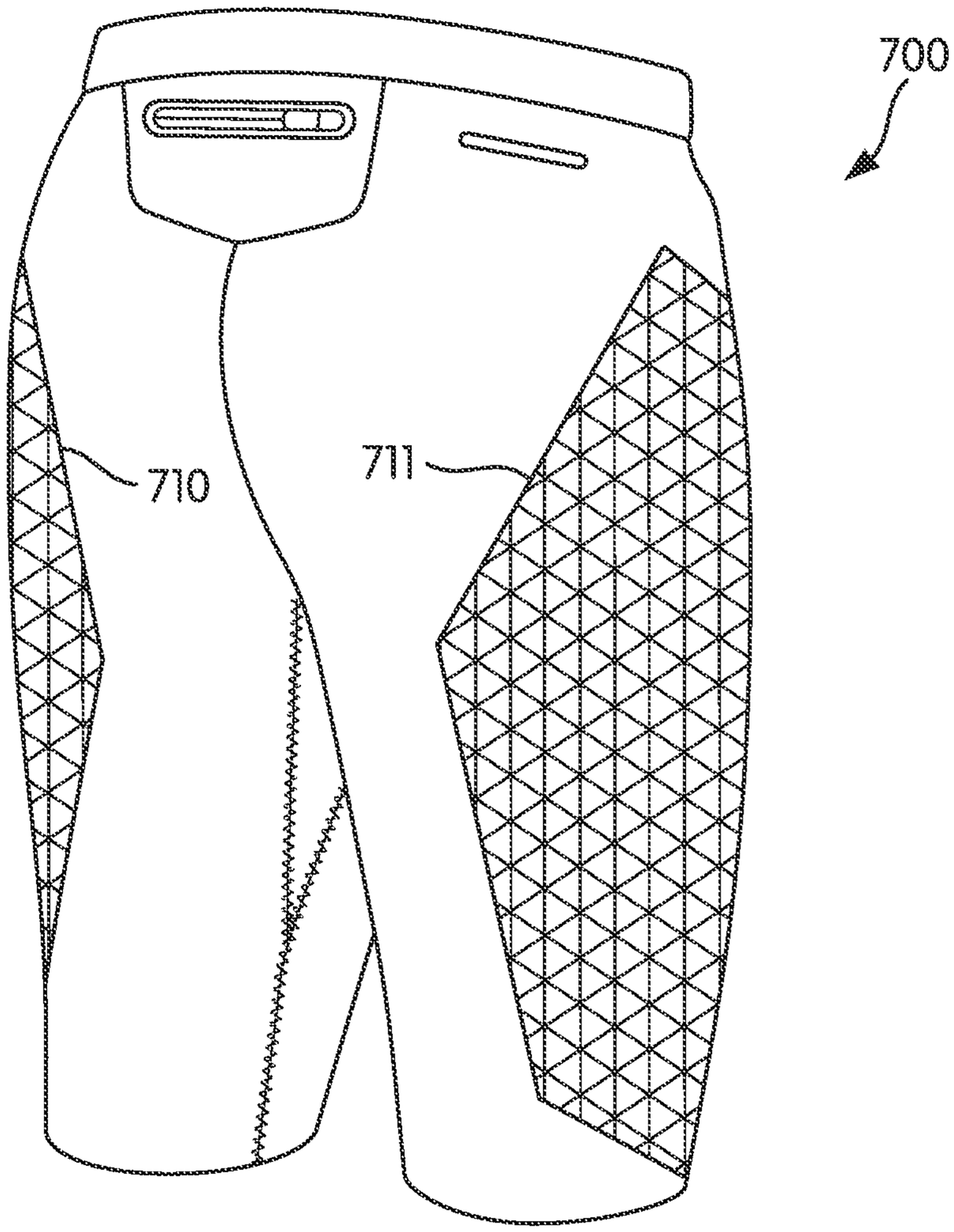

FIG. 7B

LOWER BODY GARMENT WITH ELASTICITY-REDUCING PANEL

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority of U.S. provisional patent application 61/444,661, filed Feb. 18, 2011, and titled "Garment," which application in its entirety is incorporated by reference herein.

BACKGROUND

Running, jogging and other forms of exercise can result in a participant experiencing at least some degree of fatigue. This fatigue can take both physical and mental forms. Physically, a person's muscles can become tired and/or sore. Mentally, some forms of exercise can be tedious, which tedium can be exacerbated if a person is experiencing discomfort. Providing additional support to fatigued muscles can help reduce physical fatigue. Providing a feeling of support to fatigued muscles can help to reduce mental fatigue.

SUMMARY

This Summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This Summary is not intended to identify key features or essential features of the invention.

In at least some embodiments, a garment may be formed from a stretchable material. Various portions of the garment may contain imprinted ink. Elasticity of the garment fabric is reduced in the regions onto which the ink has been printed, thereby providing support and/or a feeling of support to certain muscles and/or muscle groups. In some embodiments, the garment can be a garment intended for wear by a runner or jogger.

In some embodiments, a garment can include at least one stretchable fabric element and a first elasticity-reducing panel. The garment may be configured for wear by an individual, and the first elasticity-reducing panel may comprise a first pattern imprinted onto a first portion of the at least one stretchable fabric element. The first pattern may comprises lines. Portions of lines in an interior region of the first pattern may have a thickness less than a thickness of line portions in peripheral regions of the first pattern.

In some embodiments, a garment may comprise a stretch fabric lower body garment and a plurality of elasticity-reducing panels. At least a portion of the elasticity-reducing panels may be located in thigh regions of the garment. Each of the panels may comprise a pattern of ink lines imprinted onto the stretch fabric. Each of the panels may expose a substantial portion of the stretch fabric within the boundaries of the imprinted pattern.

Additional embodiments are described below.

BRIEF DESCRIPTION OF THE DRAWINGS

Some embodiments are illustrated by way of example, and not by way of limitation, in the figures of the accompanying drawings and in which like reference numerals refer to similar elements.

FIGS. **1**A and **1**B are front and rear views, respectively, of a garment according to some embodiments.

FIG. **2**A shows a print pattern for a left thigh panel of the garment of FIGS. **1**A and **1**B.

FIG. **2**B shows a print pattern for a right thigh panel of the garment of FIGS. **1**A and **1**B.

FIG. **3**A shows a print pattern for a left knee panel of the garment of FIGS. **1**A and **1**B.

FIG. **3**B shows a print pattern for a right knee panel of the garment of FIGS. **1**A and **1**B.

FIG. **4**A shows a print pattern for a left calf panel of the garment of FIGS. **1**A and **1**B.

FIG. **4**B shows a print pattern for a right calf panel of the garment of FIGS. **1**A and **1**B.

FIGS. **5**A through **5**D are front views of garments, similar to the garment of FIGS. **1**A and **1**B, according to additional embodiments.

FIGS. **6**A and **6**B are front and rear views, respectively, of a garment according to another embodiment.

FIGS. **7**A and **7**B are front and rear views, respectively, of a garment according to an additional embodiment.

DETAILED DESCRIPTION

In at least some embodiments, a garment can comprise a stretchable fabric and be configured for wear as a lower body garment. As but one example, such a lower body garment could be intended for wear by a runner or jogger. One or more regions of the garment can include areas in which the elasticity of the garment fabric has been reduced. In particular, those regions can include imprinted patterns. In those regions, the elasticity of fabric portions having an applied pattern is reduced. This reduction of elasticity in selected portions of the garment fabric provides support and/or a feeling of support to certain muscles and/or muscle groups.

FIG. **1**A is a front view of a garment **100** according to some embodiments. FIG. **1**B is a rear view of garment **100**. Garment **100**, as indicated above, is configured for wear as a lower body garment and intended for use by a runner or jogger. In particular, garment **100** is a pair of "tights" configured for relatively tightly-fitting wear by a runner or jogger. As used herein, "configured for wear" refers to a garment being generally ready for wear by a person for whom the garment is properly sized. "Configured for wear" can contemplate some amount of adjustment or additional configuration such as opening or closing fasteners (zippers, VELCRO, snaps, etc.).

Garment **100** can be formed from various fabrics. Examples of fabrics that can be used include spandex and other stretchable synthetic materials. In some embodiments, the fabric is a blend of cotton, polyester and spandex fibers that includes hollow polyester fibers that wick moisture. Examples of such fabrics include fabrics sold under the name DRI-FIT by NIKE, Inc. of Beaverton, Oreg. Such fabrics move perspiration from the skin to the garment surface where the perspiration can evaporate quickly so as to help keep a wearer dry and comfortable. The spandex fibers within the material stretch to provide a comfortable, personalized fit.

Individual elements of garment **100** can be cut from larger sheets of stretchable fabric, and those elements can be assembled into garment **100** using any of various standard assembly techniques. As but one example, a first stretchable fabric element **101** can be used to form a left leg of garment **100**. A second stretchable fabric element **102** can be used to form a right leg of garment **100**. Another stretchable fabric element **103** can be used to form a crotch gusset of garment **100**. An additional stretchable fabric element **104** can used to form a stomach panel of garment **100**. Stretchable fabric element **105** can be used to form a rear panel/pocket of garment **100**, with stretchable fabric element **106** used to form a waistband of garment **100**. Elements **101**-**106** can be stitched

or otherwise joined along adjoining boundaries in a customary manner. In other embodiments, more or fewer fabric elements could be used to create garment **100**.

Unlike previously known lower body garments, garment **100** includes a plurality elasticity reducing panels **110** through **115**. In particular, garment **100** includes a printed left thigh panel **110**, a printed right thigh panel **111**, a printed left knee panel **112**, a printed right knee panel **113**, a printed left calf panel **114** and a printed right calf panel **115**. Each of panels **110** through **115** comprises a pattern that has been screen printed onto the fabric of garment **100** with a conventional silicone-based, non-PVC ink. The patterns of panels **110**, **112** and **114** have been screen printed onto element **101**, and the patterns of panels **111**, **113** and **115** have been screen printed onto element **102**, prior to assembly of elements **101** and **102** into garment **100**.

After curing, the ink within patterns **110** through **115** reduces elasticity in the portions of the garment **100** fabric to which that cured ink is bonded. When garment **100** is worn, this reduced elasticity may help to provide support to and/or a feeling of support in the wearer muscle(s) underlying patterns **110** through **115**.

The inside (medial) edges of left knee panel **112** and/or of left calf panel **114** may extend to or over left inseam **118** (FIG. **1**B). Similarly, inside (medial) edges of right knee panel **113** and/or of right calf panel **115** may extend to or over right inseam **119** (FIG. **1**A).

Garment **100** may include gripper elastic (not shown) in the ankle openings **121** and **122**. Bonded zippers can also be included on the outside near the ankle openings. Although only bonded zipper **123** in the right rear is shown (FIG. **1**B), a similar bonded zipper is present in a corresponding location on the left rear side. Garment **100** may further include a no-sew waistband **124** to reduce chafing and increase comfort. A reflective bonded zippered pocket **125** on the center back and a bonded drop-in pocket **126** on the back right hip provide secure storage for small items and remain visible in low light conditions. Garment **100** may include minimal seaming to reduce irritation from chafing. Additional reflective elements can be included at the waist and elsewhere on garment **100**. Seams **170** and **171** can be included on lateral sides of knee panels **112** and **113**, respectively, and can be stitched or otherwise bonded in place.

FIG. **2**A shows a pattern **200** used to create left thigh panel **110**. In particular, pattern **200** is a pattern of ink that is screen imprinted onto fabric element **101**, when element **101** is in a flattened condition, so as to create panel **110**. So as to indicate the correspondence between pattern **200** and panel **110**, reference number **110** is shown parenthetically after reference number **200** in FIG. **2**A. A similar convention will be followed for individual components of panel **110** and pattern **200**, as well as in connection with patterns (and corresponding panels) discussed in connection with FIGS. **2**B through **4**B.

Pattern **200** has four sides **200***a* through **200***d*. The longest side **200***a* corresponds to edge **110***a* of panel **110**. The correspondence of sides **200***b* through **200***d* to the other edges of panel **110** can be deduced from the shapes of pattern **200** and panel **110**.

Pattern **200** includes multiple intersecting lines within sides **200***a* through **200***d*. These lines form a mesh that extends throughout the space within the boundaries of sides **200***a* through **200***d*, while still exposing a substantial amount of interstitial space between the lines. That interstitial space will correspond to a substantial amount of exposed fabric in a corresponding panel.

In the orientation shown in FIG. **2**A, the lines of pattern **200** include six vertical lines **201***a* through **201***f*, twelve inclining lines **202***a* through **202***l*, and nine declining lines **203***a* through **203***j*. Within an interior region **204**, various line segments have thicknesses that are substantially reduced relative to thicknesses of line segments in peripheral regions of pattern **200** outside of region **204**. For example, a segment of line **201***c* between the intersection of lines **201***c*, **202***g* and **203***e* and the intersection of lines **201***c*, **202***h* and **203***f* has a width w**1**. A segment of **203***j* between the intersection of lines **203***j*, **201***a* and **202***j* and the intersection of lines **203***j*, **201***b* and **202***k* has a width w**2** that is more than twice that of w**1**.

As used herein (including the claims) when discussing patterns and corresponding elasticity reducing panels, "line" includes curves as well straight lines. In pattern **200**, as well as in patterns described in connection with FIGS. **2**B through **4**B, the pattern lines are predominantly straight. In other embodiments, however, lines within a pattern or corresponding panel could be curved.

In some embodiments, and as is also seen in FIG. **2**A, intersections of lines within a region of reduced line width can be broadened. Stated differently, additional ink can be added in the space where two narrowed line segments meet. This increased ink between adjacent lines at intersections and can reduce the risk of pattern separation at those intersections of narrowed segments once the ink has cured.

FIG. **2**B shows a pattern **250** of ink that is screen imprinted onto fabric element **102**, when element **102** is in a flattened condition, so as to create right thigh panel **111**. Pattern **250** is a mirror image of pattern **200** and has four sides **250***a* through **200***d*. The longest side **250***a* corresponds to edge **111***a* of panel **111**. The correspondence of sides **250***b* through **250***d* to the other edges of panel **111** can be deduced from the shapes of pattern **250** and panel **111**. In the orientation of pattern **250** depicted in FIG. **2**B, the lines of pattern **250** include six vertical lines **251***a* through **251***f*, twelve declining lines **252***a* through **252***l*, and nine inclining lines **253***a* through **253***j*. Inside an interior region **254**, portions of various lines have thicknesses that are substantially reduced relative to thicknesses of line portions in peripheral regions of pattern **250** outside of region **254**. For example, the segment between the intersection of lines **251***c*, **252***k* and **253***i* and the intersection of lines **251***b*, **252***k* and **253***j* has a width w**2** that is at least twice the width w**1** of the segment between intersection of lines **251***c*, **252***h* and **253***f* and the intersection of lines **251***c*, **252***i* and **253***g*.

FIG. **3**A shows a pattern **300** used to create left knee panel **112**. In particular, pattern **300** is a pattern of ink that is screen imprinted onto fabric element **101**, when element **101** is in a flattened condition, so as to create panel **112**. Pattern **300** has six sides **300***a* through **300***f*. Side **300***a* corresponds to edge **112***a* of panel **112**. The correspondence of sides **300***b* through **300***f* to the other edges of panel **112** can be deduced from the shapes of pattern **300** and panel **112**.

Pattern **300** includes multiple intersecting lines within sides **300***a* through **300***f*. These lines form a mesh that extends throughout the space within the boundaries of sides **300***a* through **300***f*, while still exposing a substantial amount of interstitial space between the lines. In the orientation depicted in FIG. **3**A, the pattern **300** lines include eight vertical lines **301***a* through **301***h*, seven inclining lines **302***a* through **302***g*, and seven declining lines **303***a* through **303***g*. Within an interior region **304**, various line segments have thicknesses that are substantially reduced relative to thicknesses of line segments in peripheral regions of pattern **300** outside of region **304**. For example, a segment of line **301***e* between the intersection of lines **301***e*, **302***c* and **303***b* and the intersection of

lines **301***e*, **302***d* and **303***c* has a width w**3**. A segment of line **301***b* between the intersection of lines **301***b*, **302***d* and **303***f* and the intersection of lines **301***b*, **302***e* and **303***g* has a width w**4** that is more than twice that of w**3**. Width w**3** can (but need not) be the same as width w**1** and width w**4** can (but need not) be the same as width w**2**. Similar to pattern **200** of FIG. **2**A, intersections within interior region **304** can be broadened.

FIG. **3**B shows a pattern **350** of ink that is screen imprinted onto fabric element **102**, when element **102** is in a flattened condition, so as to create right knee panel **113**. Pattern **350** is a mirror image of pattern **300** and has six sides **350***a* through **350***f*. Side **350***a* corresponds to edge **113***a* of panel **113**. The correspondence of sides **350***b* through **350***f* to the other edges of panel **113** can be deduced from the shapes of pattern **350** and panel **113**. In the orientation of pattern **350** shown in FIG. **3**B, the lines of pattern **350** include six vertical lines **351***a* through **351***f*, seven declining lines **352***a* through **352***g*, and seven inclining lines **353***a* through **353***g*. Inside an interior region **354**, portions of various lines have thicknesses that are substantially reduced relative to thicknesses of line portions in peripheral regions of pattern **350** outside of region **354**. For example, the segment between the intersection of lines **351***b*, **352***d* and **353***f* and the intersection of lines **351***b*, **352***e* and **353***g* has a width w**4** that is at least twice the width w**3** of the segment between intersection of lines **351***e*, **352***c* and **353***b* and the intersection of lines **351***e*, **352***d* and **353***c*.

FIG. **4**A shows a pattern **400** used to create left calf panel **114**. In particular, pattern **400** is a pattern of ink that is screen imprinted onto fabric element **101**, when element **101** is in a flattened condition, so as to create panel **114**. Pattern **400** has seven sides **400***a* through **400***g*. Side **400***b* corresponds to edge **114***a* of panel **112**. The correspondence of sides **400***a* and **400***c* through **400***g* to the other edges of panel **114** can be deduced from the shapes of pattern **400** and panel **114**.

Pattern **400** includes multiple intersecting lines within sides **400***a* through **400***g*. These lines form a mesh that extends throughout the space within the boundaries of sides **400***a* through **400***g*, while still exposing a substantial amount of interstitial space between the lines. In the orientation depicted in FIG. **4**A, the pattern **400** lines include ten vertical lines **401***a* through **401***j*, twelve inclining lines **402***a* through **402***l*, and fourteen declining lines **403***a* through **403***n*. Within an interior region **404**, various line segments have thicknesses that are substantially reduced relative to thicknesses of line segments in peripheral regions of pattern **400** outside of region **404**. For example, a segment of line **401***f* between the intersection of lines **401***f*, **402***e* and **403***f* and the intersection of lines **401***f*, **402***f* and **403***g* has a width w**5**. Width w**5** may be the same or different than w**1** and/or w**3**. A segment of line **401***c* between the intersection of lines **401***c*, **402***d* and **403***h* and the intersection of lines **401***c*, **402***e* and **403***i* has a width w**6** that is more than twice that of w**5**. Width w**6** may be the same or different than w**2** and/or w**4**. Similar to pattern **200** of FIG. **2**A and pattern **300** of FIG. **3**A, intersections within interior region **404** can be broadened.

FIG. **4**B shows a pattern **450** of ink that is screen imprinted onto fabric element **102**, when element **102** is in a flattened condition, so as to create right calf panel **115**. Pattern **450** is a mirror image of pattern **400** and has seven sides **450***a* through **450***g*. Side **450***b* corresponds to edge **115***a* of panel **115**. The correspondence of sides **450***a* and **450***c* through **450***g* to the other edges of panel **115** can be deduced from the shapes of pattern **450** and panel **115**. In the orientation of pattern **450** shown in FIG. **4**B, the lines of pattern **450** include ten vertical lines **451***a* through **451***j*, twelve declining lines **452***a* through **452***l*, and fourteen inclining lines **453***a* through **453***n*. Inside an interior region **454**, portions of various lines have thicknesses that are substantially reduced relative to thicknesses of line portions in peripheral regions of pattern **450** outside of region **454**. For example, the segment between the intersection of lines **451***c*, **452***d* and **453***h* and the intersection of lines **451***c*, **452***e* and **453***i* has a width w**6** that is at least twice the width w**5** of the segment between intersection of lines **451***f*, **452***e* and **453***f* and the intersection of lines **451***f*, **452***f* and **453***g*.

In each of patterns **200**, **250**, **300**, **350**, **400** and **450**, and as described above, the thicknesses of pattern lines in the interior regions (i.e., within regions **204**, **254**, **304**, **354**, **404**, **454**) is significantly less than the thicknesses of pattern lines in regions closer to the pattern periphery. As a result, each of panels **110**, **111**, **112**, **113**, **114** and **115** includes a region (corresponding to one of regions **204**, **254**, **304**, **354**, **404**, **454**) in which lines are thinner than in the periphery of the panel. This thin line/thick line combination may help to increase the support and/or feeling of support afforded by the panels.

In each of patterns **200**, **250**, **300**, **350**, **400** and **450**, the lines are arranged so as to create equilateral triangles. In other embodiments, other patterns may be used, and other patterns may utilize other shapes and/or combinations of shapes. For example, a panel may comprise a pattern of overlapping circles and/or ovals, with the circles/ovals in an inner region of the pattern having thinner lines than the circles/ovals in regions of the pattern closer to the pattern periphery. Lines within a pattern need not be evenly distributed, e.g., some lines can be more closely spaced than others. The outer shape of a pattern can be varied from that of patterns **200**, **250**, **300**, **350**, **400** and **450**.

FIG. **5**A is a front view of a garment **500**A according to another embodiment. Garment **500**A is also configured for wear as a lower body garment and intended for use by a runner or jogger. Garment **500**A is substantially the same as garment **100**, is fabricated from the same type of fabric, and includes elasticity reducing panels **510**A through **515**A that are respectively identical to panels **110** through **115**. Unlike garment **100**, garment **500**A includes a lateral outer seam **570**A that extends along the lateral edge of printed left knee panel **512**A. A similar lateral outer seam on the right side extends along the lateral edge of printed right knee panel **513**A. Seam **570**A and the corresponding lateral outer seam on the right side, which seams may be sewn and/or otherwise bonded to the fabric of garment **500**A, may help to increase the support and/or feeling of support provided by panels **512**A and **513**A.

FIG. **5**B is a front view of a garment **500**B according to an additional embodiment. Garment **500**B is substantially identical to garment **100**, is fabricated from the same type of fabric, and includes elasticity reducing panels **510**B through **515**B that are respectively identical to panels **110** through **115**. Garment **500**B includes a lateral outer seam **570**B that extends along the lateral edge of printed left knee panel **512**B. Unlike seam **570**A, seam **570**B joins left knee panel **512**B to the lower part of left thigh panel **511**B. A similar lateral outer seam on the right side extends along the lateral edge of printed right knee panel **513**B and joins right knee panel **513**B to right thigh panel **511**B. Seam **570**B and the corresponding lateral outer seam on the right side of garment **500**B, which seams may be sewn and/or otherwise bonded to the fabric of garment **500**B, may help to increase the support and/or feeling of support provided by panels **512**B and **513**B and/or by panels **510**B and **511**B.

FIG. **5**C is a front view of a garment **500**C according to a further embodiment. Garment **500**C is substantially identical to garment **100**, is fabricated from the same type of fabric, and includes elasticity reducing panels **510**C through **515**C that

are respectively identical to panels **110** through **115**. Garment **500**C includes a lateral outer seam **570**C that extends along the lateral edge of printed left knee panel **512**C. Unlike seams **570**A and **570**B, seam **570**C joins left knee panel **512**C to left calf panel **514**C. A similar lateral outer seam on the right side extends along the lateral edge of printed right knee panel **513**C and joins right knee panel **513**C to right calf panel **515**C. Seam **570**C and the corresponding lateral outer seam on the right side of garment **500**C, which seams may be sewn and/or otherwise bonded to the fabric of garment **500**C, may help to increase the support and/or feeling of support provided by panels **512**C and **513**C and/or by panels **514**C and **515**C.

FIG. **5**D is a front view of a garment **500**D according to another embodiment. Garment **500**D is substantially identical to garment **100**, is fabricated from the same type of fabric, and includes elasticity reducing panels **510**D through **515**D that are respectively identical to panels **110** through **115**. Garment **500**D includes a lateral outer seam **570**D that extends along the lateral edge of printed left knee panel **512**D. Unlike seams **570**A, **570**B and **570**C, seam **570**D joins left knee panel **512**D to the lower part of left thigh panel **510**D and to left calf panel **514**D. A similar lateral outer seam on the right side of garment **500**D extends along the lateral edge of printed right knee panel **513**D and joins right knee panel **513**D to right thigh panel **511**D and to right calf panel **515**D. Seam **570**D and the corresponding lateral outer seam on the right side of garment **500**D, which seams may be sewn and/or otherwise bonded to the fabric of garment **500**D, may help to increase the support and/or feeling of support provided by panels **512**D and **513**D, and/or by panels **510**D and **511**D, and/or by panels **514**D and **515**D.

FIGS. **6**A and **6**B show front and rear views, respectively of a garment **600** according to a further embodiment. Garment **600** is a "Capri" version of garment **100**. In particular, garment **600** is also configured for wear as a lower body garment and intended for use by a runner or jogger. Garment **600** is fabricated from the same type of fabric as garment **100**. Garment **600** includes elasticity reducing left thigh panel **610** and right thigh panel **611** that are respectively identical to panels **110** and **111** of garment **100**. Garment **600** similarly includes elasticity reducing left knee panel **612** and elasticity reducing right knee panel **613** that are respectively identical to panels **112** and **113** of garment **100**.

Garment **600** differs from garment **100** based on the length of the legs. Specifically, the lengths of the legs of garment **600** are shorter. As a result, elasticity reducing left calf panel **614** of garment **600** is a truncated version of elasticity reducing right calf panel **114** of garment **100**. Similarly, elasticity reducing right calf panel **615** of garment **600** is a truncated version of elasticity reducing right calf panel **115** of garment **100**. Additional embodiments include "Capri" versions incorporating seams such as, e.g., seams **570**A, **570**B, **570**C or **570**D.

FIGS. **7**A and **7**B show front and rear views, respectively of a garment **700** according to another embodiment. Garment **700** is a shorts version of garment **100**. In particular, garment **700** is also configured for wear as a lower body garment and intended for use by a runner or jogger. Garment **700** is fabricated from the same type of fabric as garment **100**. Garment **700** includes elasticity reducing left thigh panel **710** and right thigh panel **711** that are respectively identical to panels **110** and **111** of garment **100**. Garment **700** is similar to garment **100** and other embodiments described thus far, except that the legs of garment **700** terminate above the knees. Accordingly, there are no knee or calf panels. Seams similar to, e.g., seam **570**B and a corresponding right side seam could be added and connected to the bottoms of thigh panels **710** and **711**.

Although various embodiments are described in connection with garments intended for wear by runners or joggers, other embodiments include garments intended for wear during other activities. Moreover, the invention is not limited to lower body garments, and may include garments that are also (or exclusively) configured for upper body wear. The invention is not limited to the shape, pattern or placement of elasticity reducing panels described. Other embodiments include garments in which elasticity reducing panels have different patterns, shapes and/or locations. A garment need not include an elasticity reducing thigh panel. For example, a lower body garment according to some embodiments may only include elasticity reducing panels in the knee and/or calf regions.

The foregoing description of embodiments has been presented for purposes of illustration and description. The foregoing description is not intended to be exhaustive or to limit embodiments of the present invention to the precise form disclosed, and modifications and variations are possible in light of the above teachings or may be acquired from practice of various embodiments. The embodiments discussed herein were chosen and described in order to explain the principles and the nature of various embodiments and their practical application to enable one skilled in the art to utilize the present invention in various embodiments and with various modifications as are suited to the particular use contemplated. Any and all combinations, subcombinations and permutations of features from above-described embodiments are the within the scope of the invention. With regard to claims directed to an apparatus, an article of manufacture or some other physical component or combination of components, a reference in the claim to a potential or intended wearer or a user of a component does not require actual wearing or using of the component or the presence of the wearer or user as part of the claimed component or component combination.

The invention claimed is:

1. A garment, comprising: at least one stretchable fabric element, wherein the garment is a lower body garment configured for wear by an individual and comprises right and left legs;

a first elasticity-reducing panel comprising a first pattern imprinted onto a first portion of the at least one stretchable fabric element in a lateral thigh region of the right leg and extending from a right front thigh region to a right rear thigh region, wherein

the first pattern comprises a plurality of intersecting first pattern lines forming a mesh completely bounded by first pattern edges and is confined to above-knee portions of the right leg, portions of the first pattern lines in peripheral regions having thicknesses that are at least twice as great as thicknesses of the portions of the first pattern lines in an interior region, and

the first pattern is completely surrounded by, and an entire length of an outermost portion of each of the first pattern edges is directly adjacent to, a second portion of the at least one stretchable fabric element lacking an elasticity reducing panel; and

a second elasticity-reducing panel comprising a second pattern imprinted onto a third portion of the at least one stretchable fabric element in a lateral thigh region of the left leg and extending from a left front thigh region to a left rear thigh region, wherein

the second pattern comprises a plurality of intersecting second pattern lines forming a mesh completely bounded by second pattern edges and is confined to above-knee portions of the left leg, portions of the sec-

ond pattern lines in peripheral regions having thicknesses that are at least twice as great as thicknesses of the portions of the second pattern lines in an interior region, and

the second pattern is completely surrounded by, and an entire length of an outermost portion of each of the second pattern edges is directly adjacent to, a fourth portion of the at least one stretchable fabric element lacking an elasticity reducing panel;

further comprising:

third and fourth elasticity-reducing panels, wherein

the third elasticity-reducing panel comprises a third pattern imprinted onto a knee region of the right leg,

the fourth elasticity-reducing panel comprises a fourth pattern imprinted onto a knee region of the left leg,

the third pattern comprises third pattern lines,

portions of the third pattern lines in an interior region of the third pattern have thicknesses less than thicknesses of portions of the third pattern lines in peripheral regions of the third pattern,

and the fourth pattern is a mirror image of the third pattern; and

a first lateral outer seam extending along a lateral outer edge of the third elasticity-reducing panel; and

a second lateral outer seam extending along a lateral outer edge of the fourth elasticity-reducing panel.

2. The garment of claim **1**, further comprising fifth and sixth elasticity-reducing panels, wherein

the fifth elasticity-reducing panel comprises a fifth pattern imprinted onto a calf region of the right leg, the fifth pattern not extending above the knee region of the right leg,

the sixth elasticity-reducing panel comprises a sixth pattern imprinted onto a calf region of the left leg, the sixth pattern not extending above the knee region of the left leg ,

the fifth pattern comprises fifth pattern lines,

portions of the fifth pattern lines in an interior region of the fifth pattern have thicknesses less than thicknesses of portions of the fifth pattern lines in peripheral regions of the fifth pattern, and

the sixth pattern is a mirror image of the fifth pattern.

3. The garment of claim **2**, further comprising:

a first lateral outer seam extending along a lateral outer edge of the third elasticity-reducing panel and connecting the third elasticity-reducing panel to the fifth elasticity-reducing panel; and

a second lateral outer seam extending along a lateral outer edge of the fourth elasticity-reducing panel and connecting the fourth elasticity-reducing panel to the sixth elasticity-reducing panel.

4. A garment, comprising:

a stretch fabric lower body garment, the lower body garment comprising a plurality of elasticity-reducing panels, and wherein

the elasticity-reducing panels include first and second elasticity-reducing panels respectively located in right lateral thigh and left lateral thigh regions of the garment and completely surrounded by stretch fabric portions lacking elasticity reducing panels, the first elasticity-reducing panel extending from a right front thigh region to a right rear thigh region and the second elasticity-reducing panel extending from a left front thigh region to a left rear thigh region,

each of the panels comprises a plurality of edges defining boundaries of the panel and a plurality of intersecting cross-panel ink lines imprinted onto the stretch fabric to form a mesh, each cross-panel ink line of the plurality extending across the panel within a region defined by the boundaries,

in each panel of the plurality, portions of the cross-panel ink lines adjacent to the boundaries of the panel have thicknesses at least twice as great as thicknesses of portions of the cross-panel ink lines between cross-panel ink line intersections in an interior portion of the panel, and

each of the panels exposes a substantial portion of the stretch fabric within the boundaries of the panel; and

wherein at least a portion of the elasticity- reducing panels are located in knee regions of the garment; and

further comprising: a first lateral outer seam extending along a lateral outer edge of an elasticity- reducing panel located in a right knee region; and a second lateral outer seam extending along a lateral outer edge of an elasticity- reducing panel located in a left knee region.

5. The garment of claim **4**, wherein at least a portion of the elasticity-reducing panels are located in calf regions of the garment.

6. The garment of claim **5**, further comprising:

a first lateral outer seam extending along a lateral outer edge of an elasticity-reducing panel located in a right knee region and connecting the elasticity-reducing panel located in the right knee region to an elasticity-reducing panel located in a right calf region; and

a second lateral outer seam extending along a lateral outer edge of an elasticity-reducing panel located in a left knee region and connecting the elasticity-reducing panel located in the left knee region to an elasticity-reducing panel located in a left calf region.

7. The garment of claim **1**, wherein

the third pattern lines extend across and are confined within boundaries of the third pattern.

8. The garment of claim **2**, wherein

the third pattern lines extend across and are confined within boundaries of the third pattern, and

the fifth pattern lines extend across and are confined within boundaries of the fifth pattern.

9. The garment of claim **4**, wherein

the first elasticity-reducing panel does not circumscribe the right leg and does not extend below a knee region of the right leg, and

the second elasticity-reducing panel does not circumscribe the left leg and does not extend below a knee region of the left leg.

10. The garment of claim **5**, wherein

the first elasticity-reducing panel does not circumscribe the right leg and does not extend below a knee region of the right leg,

the second elasticity-reducing panel does not circumscribe the left leg and does not extend below a knee region of the left leg,

the at least a portion of the elasticity-reducing panels located in calf regions comprises a right calf panel on the right leg and a left calf panel on the left leg,

the right calf panel does not circumscribe the right leg and does not extend above the knee region of the right leg, and

the left calf panel does not circumscribe the left leg and does not extend above the knee region of the left leg.

11. The garment of claim **1**, wherein

the at least one stretchable fabric element comprises multiple stretchable fabric elements joined along adjoining fabric element boundaries to form the lower leg garment, and

the first elasticity-reducing panel comprises a first pattern imprinted onto a single one of the stretchable fabric elements.

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